

PHENIX Technical Support 2006

PHENIX WEEKLY PLANNING

3/23/06

Don Lynch



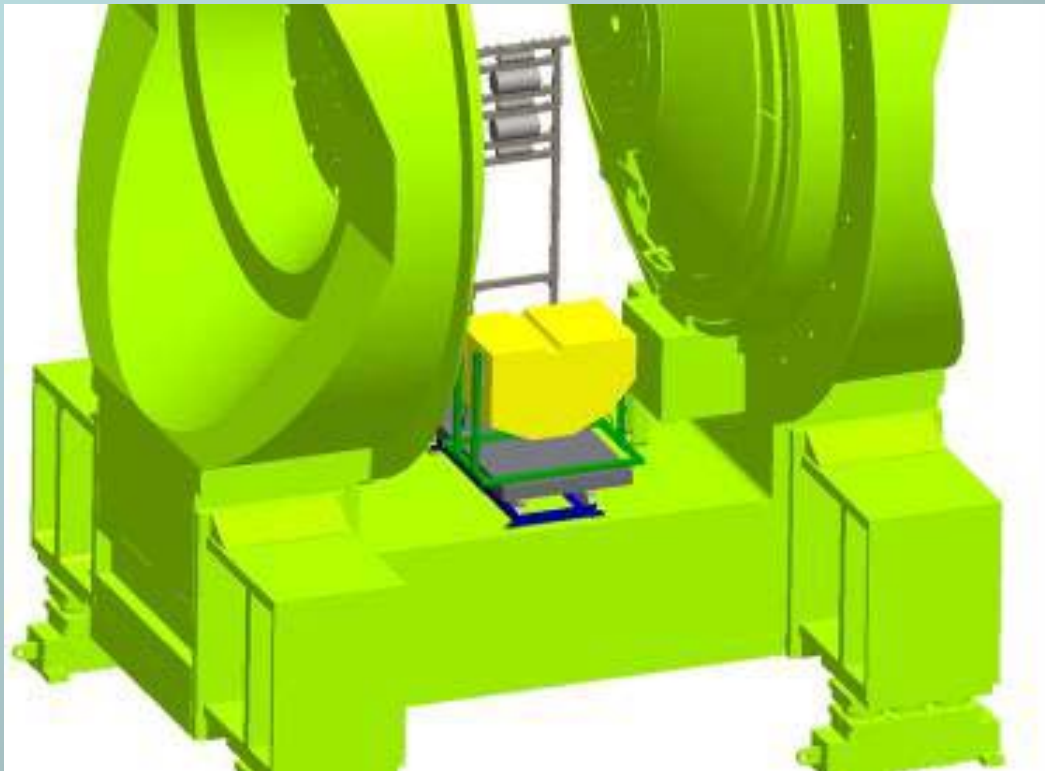
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MPC Electronics



MPC rack installed without cards. Cards to be installed
As available and as access time is available.

HBD Prototype Mounted on lift table



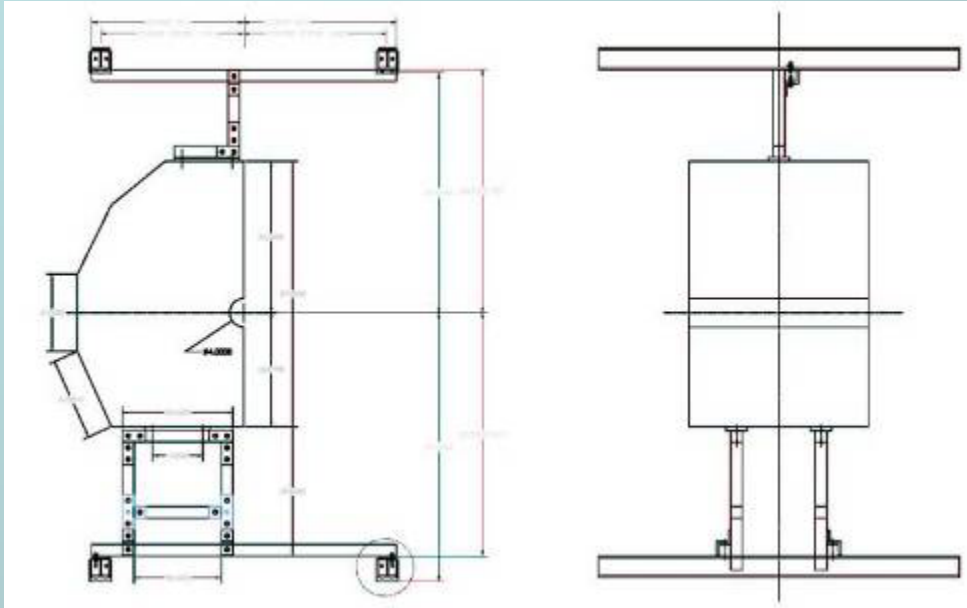
Purpose:

1. test electrical connections
2. test gas connections
3. test system performance
4. easier access to make minor adjustments
5. minimize effect on rest of detector

2-3 weeks in this position
then move to mounted
position

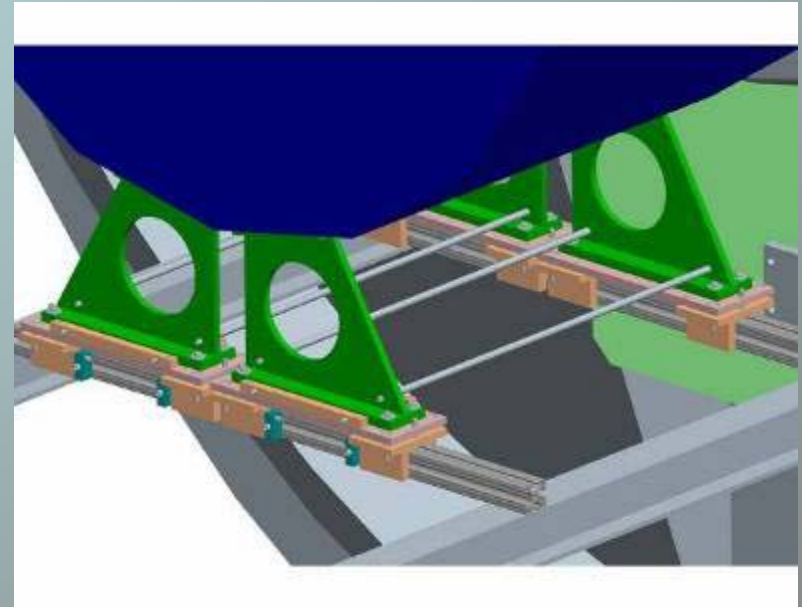
Can exist simultaneously with
BLM test in this orientation

HBD Prototype Mounting



Prototype can not use final design mounting due to differences in location of connectors and other basic design differences.

Prototype mounting to be fabricated from fg unistrut.



Design of full detector details nearly complete and ready for fabrication.

Need to design cable management for signal cables

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HBD Prototype Gas System



LN₂ Storage Dewar for BBC Remaining Tasks



Protection for Vacuum port
Needs to be redheaded



Next Access Day

- Expect next access day (8 hrs) to be March 29
- Expect shorter controlled accesses before then
- Subsystems must arrange for tech assistance prior to access day or don't expect assistance. (see Don Lynch or John Haggerty)
- PHENIX Techs only on CM lift platform unless accompanied by PHENIX Tech (Lift platform is locked and will remain locked even if legs are cut from BLM stand)
- Planned:
 - MPC cards installation
 - HBD Prep

Other Projects

TOF West

- Expect detectors to be at BNL by May 1.

HBD

- Efforts underway

MPC North

- New enclosure & fixture design to be based on lessons learned from south installation

RXNP

- Design Proceeding

Muon RPC

- Moving toward CDR in summer '06

Beampipe design

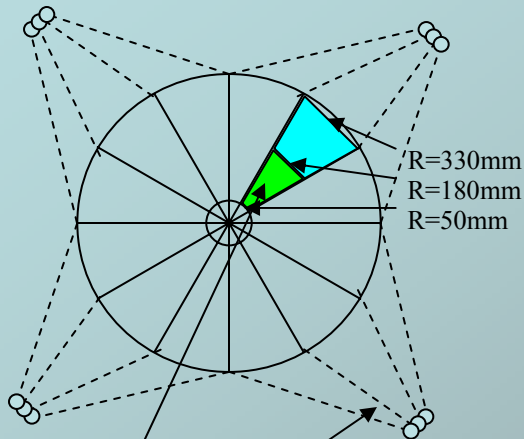
- Concept to be finalized soon

Engineering Documentation

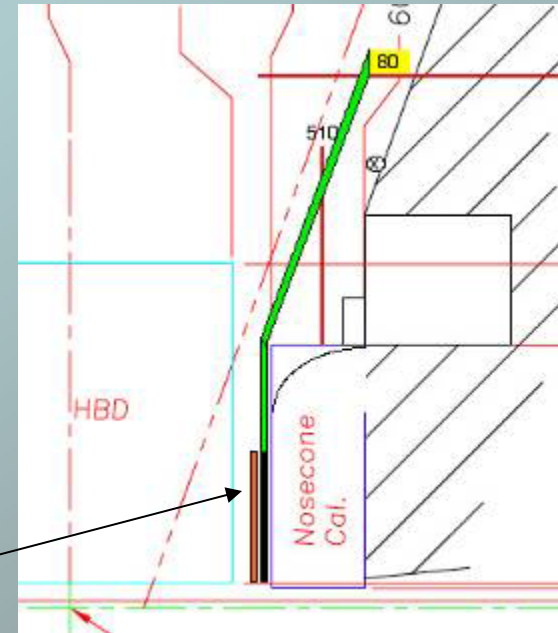
- Documentation/Drawings data base with web based retrieval
- 3D model at detector outline level with utility envelopes
- utility schematics

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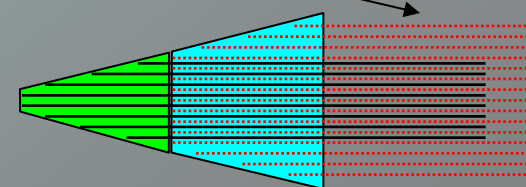
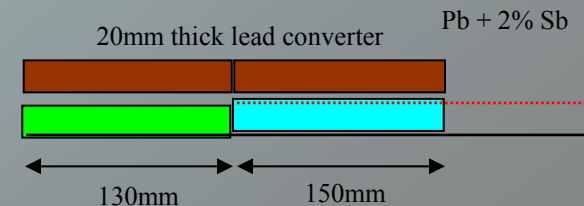
RXNP DETECTOR

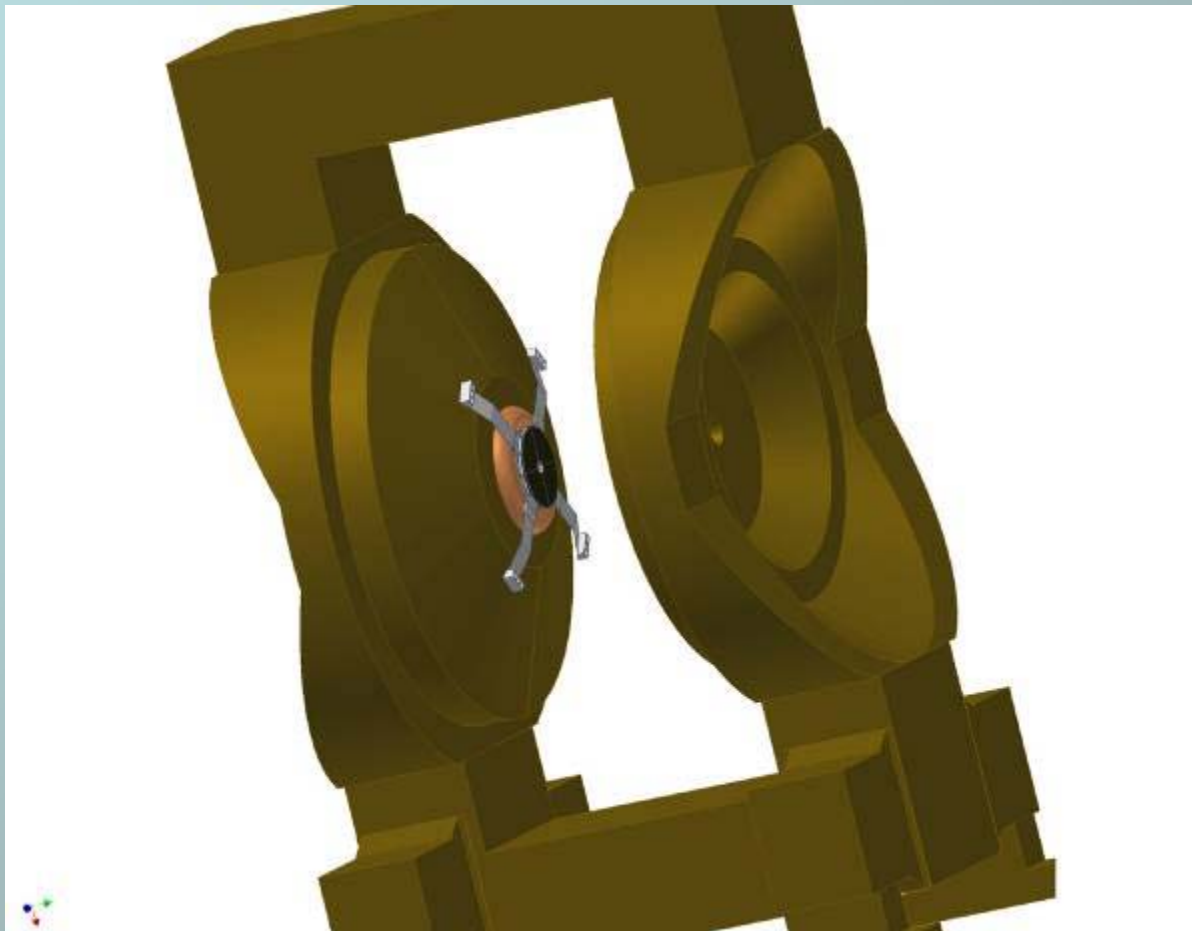


- 2cm thick scintillator + 2cm thick lead converter
 - Enhance RP resolution via adding neutral particles
- fiber light guide
 - flexibility of mechanical structure.
- 12 segments in phi and 2 segments in eta@ (1.0, 2.8)
 - Detector stable against dead channel
 - help removing auto-correlation effect.
- Hamamtsu fine mesh PMT for light readout
 - Good dynamic range and work in high field.
- EMCal FEE for electronic readout.
 - good dynamic range.

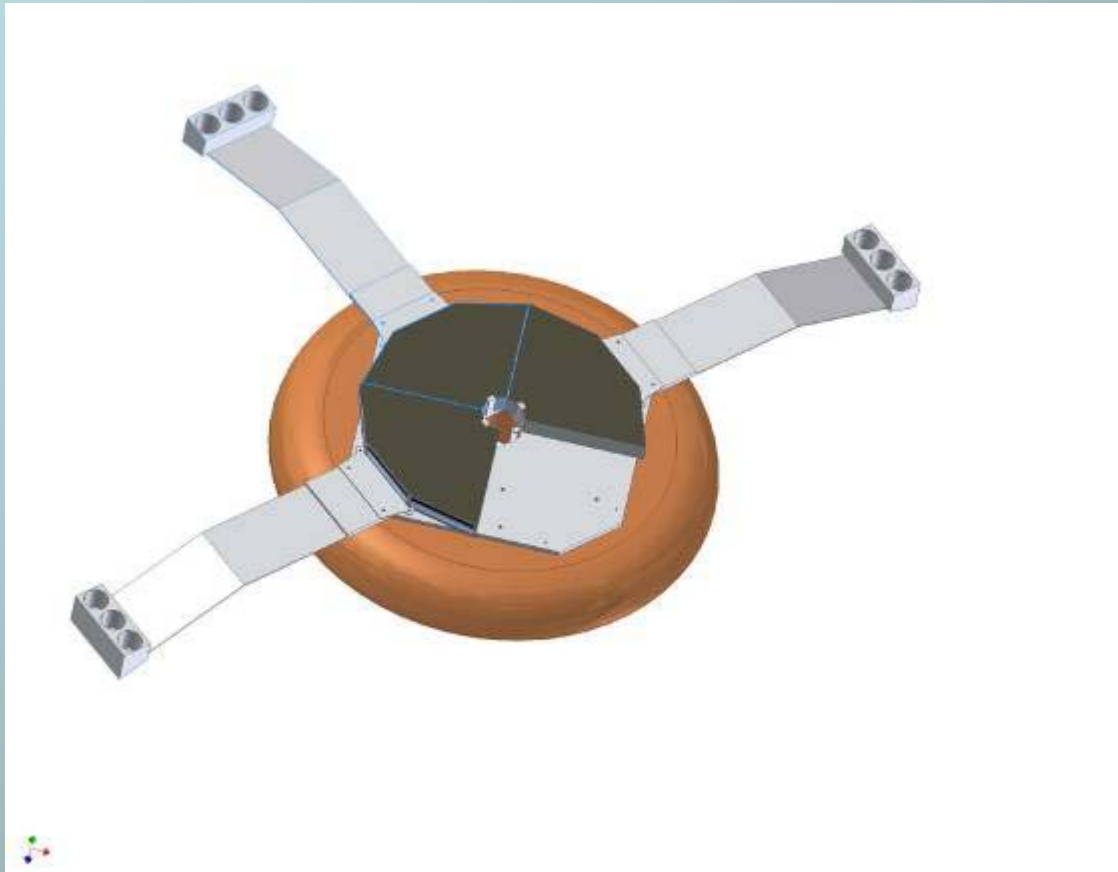


outer painting on the converter surface
or stainless steel case with lead inside

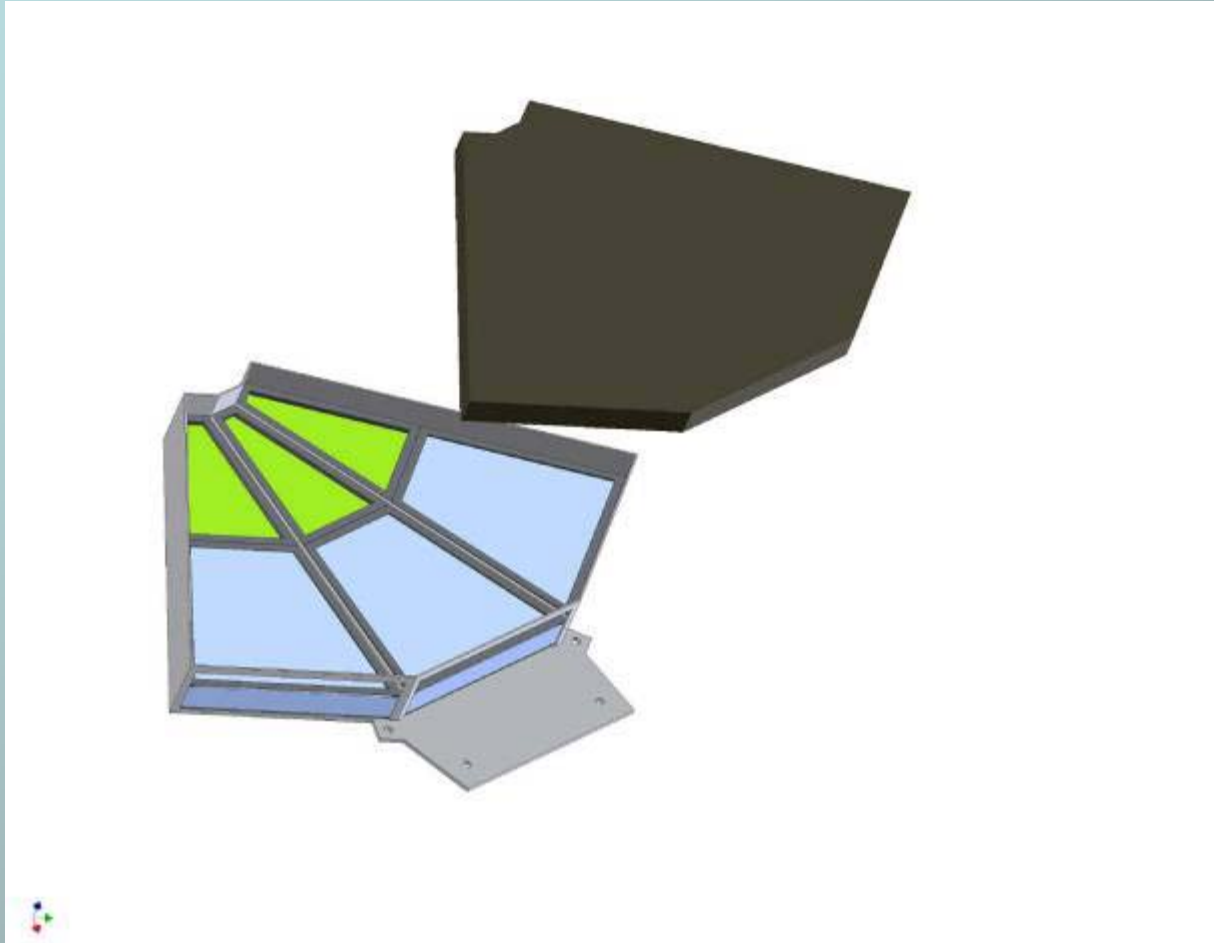




North and south
detectors each
with 4 arms to
PMT's



Assembled on bench
Into 4 quadrants.
Base Plate attaches
to Brass nosecone.

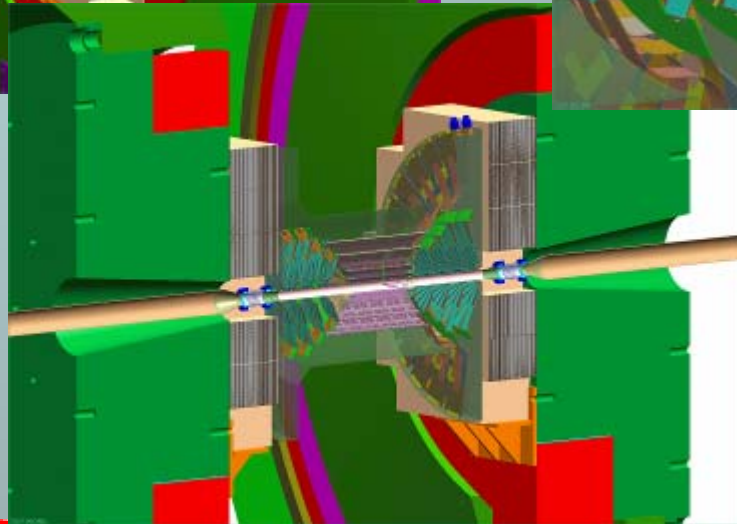
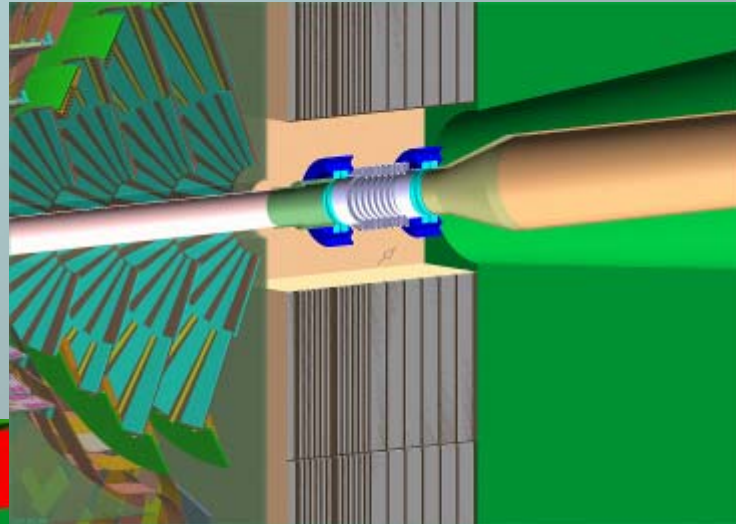
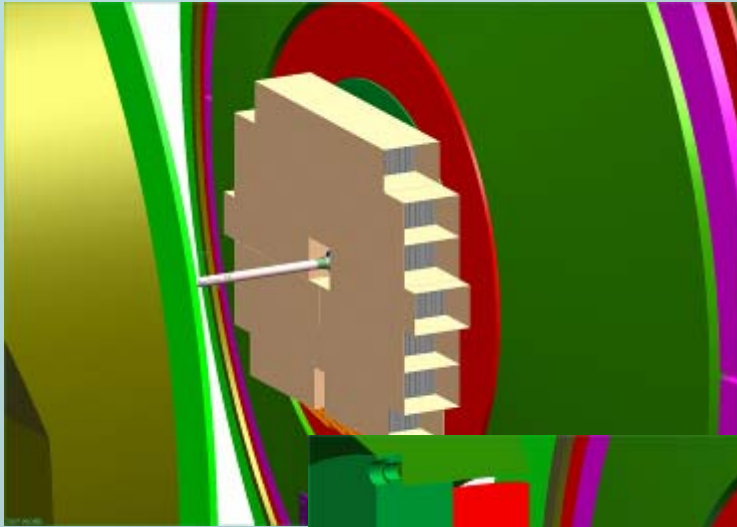


Quadrant Assembly



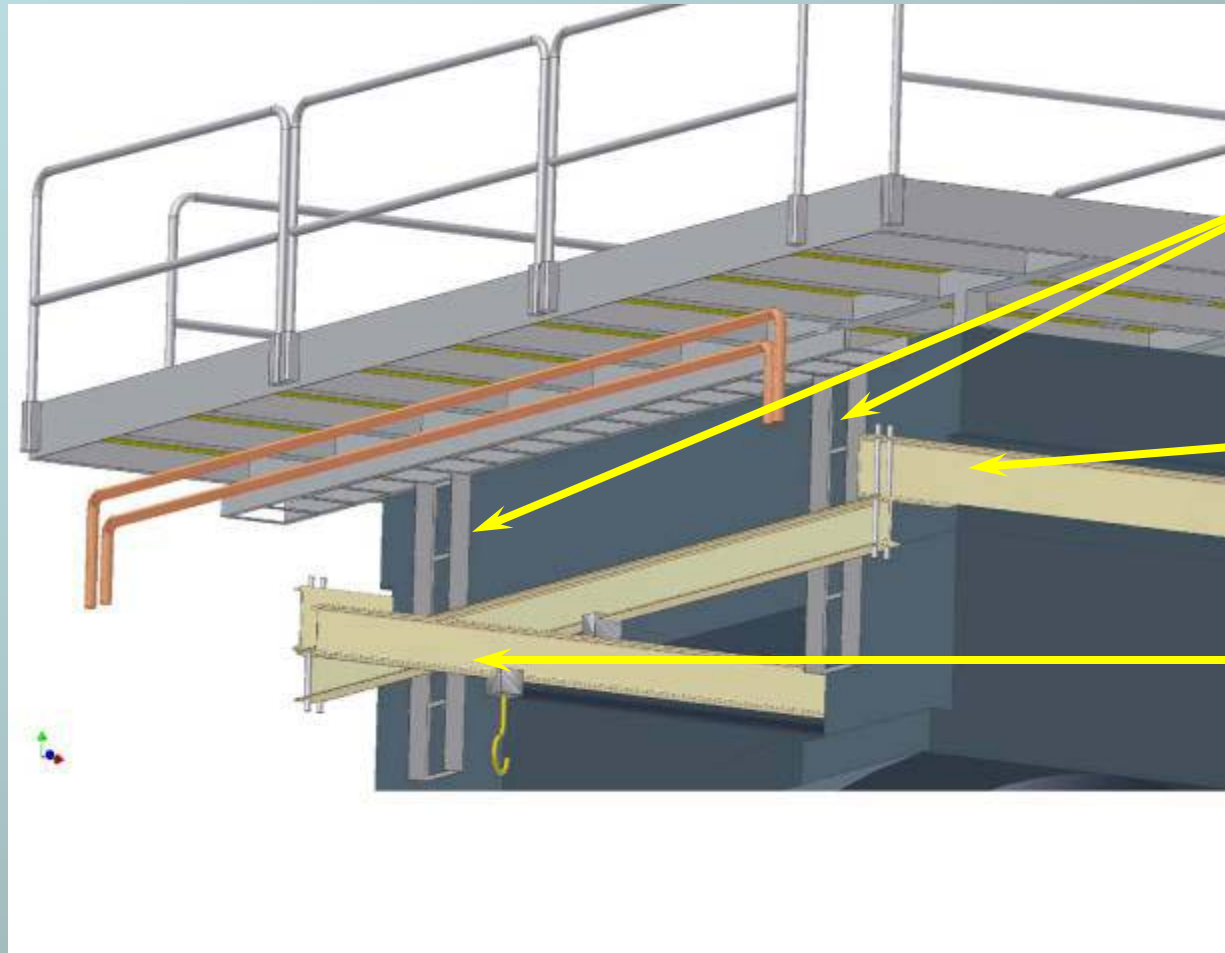
Tray

New Beampipe for Upgrades



A concept discussed between Jan Boissevain of LANL and D. Lynch of BNL. Requires support built in to NCC and temporary isolating support to move CM.

CM Region Crane & Cable Routing Concept



Cable Trays to route cables NCC Detector from Bridge

Crane Supports use existing flux return notches

CM Crane north-south & east-west motions; extended travel east to existing crane coverage

Current Tasks

- General run support
- New storage trailer (as promised)
- Fix roof leaks

Tasks for Shutdown 2006

- Install access platforms from EC top north and MMS
- Replace emergency fan louvres
- Rewire/add IR ceiling lights on emergency power
- Replace WC sliding platform hoisting cables
- Mixing house exhaust fan maintenance

MOLD Problems



GOALS

General goals

1. maintaining a safe work environment at PHENIX
2. Supporting the on-time start up of Run 6 (goal already accomplished!)
3. Maintaining all necessary training up to date
4. Working interactively with scientists and engineers as necessary to support Run 6. This includes attending weekly planning meetings and actively participating in discussions on new and future projects.
5. Providing technical support for maintenance and improvement of existing PHENIX subsystems.

New detectors (pick whichever ones you worked on and elaborate on what your contributions were or will be such as fixture fabrication and design or installation)

1. BBC LN2 cooling system
2. MuTr Dry air system upgrade
3. MPC south installation (goal already completed!)
4. RXNP magnet test (goal completed!)
5. BLM test installation (goal completed!)
6. HBD prototype installation
7. HBD final detector installation
8. TOF mockup installation test
9. HBD mockup installation test
10. MPC North design and installation
11. RXNP design and installation
12. TOF installation
13. Design and prep for MuRPC detectors
14. Infrastructure upgrades: new beampipe, new CM crane, etc.

- June '06: end run 5, prep for start of shutdown, prep EC for move to AH
- July '06: TOF West installation, RXNP installation
- Aug. '06: MPC North installation, HBD installation
- Sep. '06: Detector subsystems maintenance, roll EC in, prep for run 6
- Oct. '06: Plan to start cooldown on Oct. 15th

Subsystems: Get requests for maintenance in early to get on the schedule

Links for weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found from the web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm